

## **APPENDIX D**

### **WINNIPESAUKE RIVER WATERSHED**

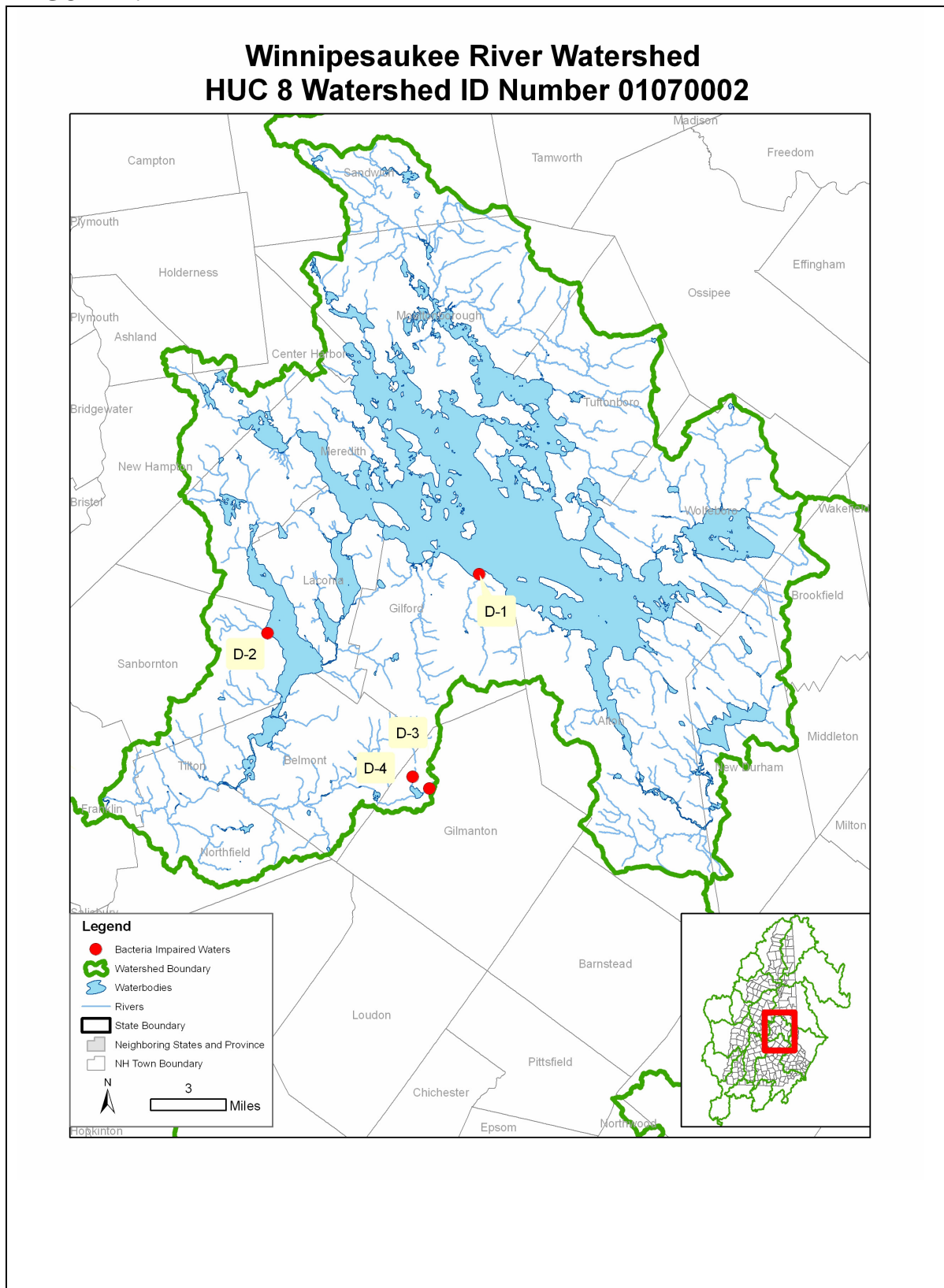
(HUC8: 01070002)

#### **I. WATERSHED DESCRIPTION AND MAPS**

The Winnepesauke River Watershed covers an area of approximately 486 square miles situated in eastern, central part of New Hampshire. There are 21 towns located at least partially within the watershed, extending from the southern-most town of Alton to the northern-most town of Sandwich. West to east the town boundaries are Franklin and Brookfield respectively. As shown in Figure 1, the primary watercourse in the region is the Winnepesauke River which is the outflow of Lake Winnepesauke. The river course begins at the lake and flows west through a series of smaller ponds exiting the watershed in Franklin, NH. Notable mountains in the area are the Belknap Range on the southwestern border, the Moose Mountains to the southeast, and the Ossipee Mountains along the northern watershed border.

Based on the 2012 303(d) list, four assessment units (AU) in this watershed is listed as being impaired for bacteria. The location of bacteria impaired surface water AUs are shown on Figure 1 as a red circles. Item D1 through D4 presents the percent reduction needed to meet each water quality criterion (and TMDL), based on the highest recorded bacteria measurement that exceeds the criterion for the AUs, as well as the bacteria data collected in the impaired AUID that was used to list the AUs as impaired on the 2012 303(d) list.

**FIGURE 1:**



## II. WATER QUALITY DATA TABLES

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## D1: Lake Winnepesaukee – Ellacoya RV Park Beach

AUID NHLAK700020110-02-39

**Characteristics:** freshwater, class B designation, designated beach, primary contact recreation.

**Impairment:** *E coli*

**Water Quality Criteria & TMDL for *E coli***

Single sample: 88 CTS/100ML

Geometric mean: 47 CTS/100mL

**Percent reduction to meet TMDL:**

Single sample: 67%

Geometric mean: in compliance

**Data:** NHDES EMD, 2012 303(d) list

### Single sample *E coli* results (CTS/100ML)

Station Name	Station ID	Date	Result
LAKE WINNIPESAUKEE - ELLACOYA RV PARK BEACH	BCHERVGILCR	08/11/08	32
LAKE WINNIPESAUKEE - ELLACOYA RV PARK BEACH	BCHERVGILCR	08/28/08	4
LAKE WINNIPESAUKEE - ELLACOYA RV PARK BEACH	BCHERVGILCR	07/21/09	6
LAKE WINNIPESAUKEE - ELLACOYA RV PARK BEACH	BCHERVGILCR	08/13/09	9
LAKE WINNIPESAUKEE - ELLACOYA RV PARK BEACH	BCHERVGILCR	06/29/10	90
LAKE WINNIPESAUKEE - ELLACOYA RV PARK BEACH	BCHERVGILCR	07/01/10	44
LAKE WINNIPESAUKEE - ELLACOYA RV PARK BEACH	BCHERVGILCR	07/27/10	180
LAKE WINNIPESAUKEE - ELLACOYA RV PARK BEACH	BCHERVGILCR	07/29/10	46
LAKE WINNIPESAUKEE - ELLACOYA RV PARK BEACH	BCHERVGILCR	08/17/10	4
LAKE WINNIPESAUKEE - ELLACOYA RV PARK BEACH	BCHERVGILCR	06/20/11	12
LAKE WINNIPESAUKEE - ELLACOYA RV PARK BEACH	BCHERVGILCR	07/12/11	270
LAKE WINNIPESAUKEE - ELLACOYA RV PARK BEACH	BCHERVGILCR	07/14/11	12
LAKE WINNIPESAUKEE - ELLACOYA RV PARK BEACH	BCHERVGILCR	08/10/11	1

Shaded cells indicate exceedance of water quality criteria

### Geometric mean *E. coli* results (CTS/100ML)

Station Name	Date	Result
LAKE WINNIPESAUKEE - ELLACOYA RV PARK BEACH	08/17/10	42.03
LAKE WINNIPESAUKEE - ELLACOYA RV PARK BEACH	08/10/11	14.04

## D2: Town Beach #1 – Winnisquam Lake

AUID NHLAK700020201-05-02

**Characteristics:** freshwater, class B designation, designated beach, primary contact recreation.

**Impairment:** *E coli*

**Water Quality Criteria & TMDL for *E coli***

Single sample: 88 CTS/100ML

Geometric mean: 47 CTS/100mL

**Percent reduction to meet TMDL:**

Single sample: 78%

Geometric mean: in compliance

**Data:** NHDES EMD, 2012 303(d) list

### Single sample *E coli* results (CTS/100ML)

Station Name	Station ID	Date	Result
TOWN BEACH #1 WINNISQUAM LAKE	1510-LT	08/23/06	40
TOWN BEACH #1 WINNISQUAM LAKE	1510-RT	08/23/06	10
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	06/26/01	0
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	07/01/02	8
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	08/09/02	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	06/24/03	26
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	07/24/03	32
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	07/02/04	4
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	07/28/04	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	08/17/04	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	07/01/05	6
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	07/19/05	6
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	08/17/05	2
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	07/06/06	10
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	07/19/06	10
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	08/09/06	160
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	06/18/07	2
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	07/03/07	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	07/26/07	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	08/15/07	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	06/24/08	4
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	06/30/08	10
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	07/31/08	4
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	08/28/08	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	06/23/09	4
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	07/21/09	29
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	08/13/09	17
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	06/29/10	3
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	07/27/10	400
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	07/29/10	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	08/17/10	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	06/28/11	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	07/12/11	4
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANLF	08/10/11	10

TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	06/26/01	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	07/01/02	4
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	08/09/02	0
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	06/24/03	31
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	07/24/03	2
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	07/02/04	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	07/28/04	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	08/17/04	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	07/01/05	8
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	07/19/05	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	08/17/05	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	07/06/06	28
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	07/19/06	10
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	08/09/06	24
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	06/18/07	6
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	07/03/07	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	07/26/07	4
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	08/15/07	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	06/24/08	6
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	06/30/08	4
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	07/31/08	8
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	08/28/08	4
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	06/23/09	8
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	07/21/09	4
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	08/13/09	16
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	06/29/10	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	07/27/10	12
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	07/29/10	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	08/17/10	4
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	06/28/11	2
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	07/12/11	1
TOWN BEACH #1 WINNISQUAM LAKE	BCHWSQSANRT	08/10/11	14

Shaded cells indicate exceedance of water quality criteria

**Geometric mean *E. coli* results (CTS/100ML)**

<b>Station Name</b>	<b>Date</b>	<b>Result</b>
TOWN BEACH #1 WINNISQUAM LAKE	08/09/02	3.56
TOWN BEACH #1 WINNISQUAM LAKE	07/24/03	15.07
TOWN BEACH #1 WINNISQUAM LAKE	08/17/04	1.26
TOWN BEACH #1 WINNISQUAM LAKE	08/17/05	2.88
TOWN BEACH #1 WINNISQUAM LAKE	08/23/06	21.34
TOWN BEACH #1 WINNISQUAM LAKE	08/15/07	1.62
TOWN BEACH #1 WINNISQUAM LAKE	07/31/08	5.60
TOWN BEACH #1 WINNISQUAM LAKE	08/28/08	4.15
TOWN BEACH #1 WINNISQUAM LAKE	08/13/09	10.02
TOWN BEACH #1 WINNISQUAM LAKE	08/17/10	3.94
TOWN BEACH #1 WINNISQUAM LAKE	08/10/11	3.22

### D3: Badger Brook

AUID NHRIV700020202-11

**Characteristics:** freshwater, class B designation, primary contact recreation.

**Impairment:** *E coli*

**Water Quality Criteria & TMDL for *E coli***

Single sample: 406 CTS/100ML

Geometric mean: 126 CTS/100mL

**Percent reduction to meet TMDL:**

Single sample: 75%

Geometric mean: 73%

**Data:** NHDES EMD, 2012 303(d)

#### Single sample *E coli* results (CTS/100ML)

Station Name	Station ID	Date	Result
BADGER BROOK	SAWGLMI2	06/28/10	140
BADGER BROOK	SAWGLMI2	07/29/10	460
BADGER BROOK	SAWGLMI2	08/26/10	1660
BADGER BROOK	SAWGLMI2	07/22/11	530

Shaded cells indicate exceedance of water quality criteria

#### Geometric mean *E. coli* results (CTS/100ML)

Station Name	Date	Result
BADGER BROOK	08/26/10	474.60

Shaded cells indicate exceedance of water quality criteria

#### D4: Unnamed Brook

AUID NHRIV700020202-18

**Characteristics:** freshwater, class B designation, primary contact recreation.

**Impairment:** *E coli*

**Water Quality Criteria & TMDL for *E coli***

Single sample: 406 CTS/100ML

Geometric mean: 126 CTS/100mL

**Percent reduction to meet TMDL:**

Single sample: 65%

Geometric mean: 81%

**Data:** NHDES EMD, 2012 303(d)

##### Single sample *E coli* results (CTS/100ML)

Station Name	Station ID	Date	Result
UNNAMED BROOK	SAWGLMI1	08/28/09	10
UNNAMED BROOK	SAWGLMI1	06/28/10	480
UNNAMED BROOK	SAWGLMI1	07/29/10	570
UNNAMED BROOK	SAWGLMI1	08/26/10	1150
UNNAMED BROOK	SAWGLMI1	07/22/11	580
UNNAMED BROOK	SAWGLMI1	09/27/09	160

Shaded cells indicate exceedance of water quality criteria

##### Geometric mean *E. coli* results (CTS/100ML)

Station Name	Date	Result
UNNAMED BROOK	08/26/10	680.15

Shaded cells indicate exceedance of water quality criteria